

REMARKS

Claims 1-24 are all the claims pending in the application. By this Amendment, new claims 19-24 have been added which are supported by *at least* page 13, line 7 to page 15, line 3 of the Specification.

Claim Rejections - 35 U.S.C. § 103

Claims 1-14 and 16 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 4,437,111 to Inai *et al.* ("Inai"), in view of U.S. Patent No. 4,774,564 to Konishi, and further in view of U.S. Patent No. 5,293,225 to Nishiyama. Claim 15 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Inai, in view of Konishi, in view of Nishiyama, and further in view of U.S. Patent No. 5,091,743 to Nagata. Claims 16-17 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Inai, in view of Konishi, in view of Nishiyama, and further in view of U.S. Patent No. 7,057,653 to Kubo.

For *at least* the following reasons, Applicants respectfully traverse the rejection.

Claims 1-14 and 16

Applicants submit that claim 1 is patentable over any conceivable combination of Inai, Konishi, and Nishiyama. For example, claim 1 recites an image capturing method wherein *when relatively increasing or decreasing the intensity of a color separating process, an occurrence of noise generation is not thereby increased during color separation*. The Examiner admits that Inai and Konishi fail to disclose this feature (Office Action, page 5, 1st full paragraph). However, the Examiner relies on Nishiyama, specifically, a color signal processing circuit 5 of Nishiyama, to disclose this feature (*see* Nishiyama, figures 1 and 6). The color signal processing

circuit 5 includes an interpolation/color signal noise removal circuit 511 which the Examiner asserts would prevent an increase of noise occurrence during a color separation process.

Applicants respectfully submit that Nishiyama does not disclose the above-noted feature of claim 1.

In the previous Amendment, it was submitted that claim 1 is patentable over the references *at least* in view of the following:

(1) Applicants submitted the Examiner is not adhering to the explicit recitations of independent claims 1 and 4. The Examiner thinks that, although noise is added when the amplifiers in Konishi allegedly increase the intensity of color separation, Nishiyama (noise removal circuit 511) removes any noise added by Konishi. Assuming, *arguendo*, that Nishiyama can remove noise after increasing the intensity of the color separating process, the fact still remains that when increasing or decreasing the intensity of said color separating process, an occurrence of noise generation is increased in Konishi. This fact alone is contrary to the recitations of claims 1 and 4, despite the Examiner's presumption that noise increased by the amplifiers in Konishi would later be removed by implementing the noise removal circuit 511 of Nishiyama. Therefore, it is irrelevant that the Examiner presupposes that Nishiyama removes the noise caused by Konishi because Konishi fails to meet the claim features for which it was applied.

In his response, the Examiner disagrees stating that he interprets the color signal processing circuit 5 of Nishiyama as a whole unit, which performs both the color separation/difference and the noise removal and thus meets the subject claim limitation (Office Action, page 3, 1st paragraph). Applicants respectfully submit that the Examiner is mischaracterizing the operations carried out by the color signal processing circuit 5.

Nishiyama discloses that the color separation is carried out in the color signal separation circuit 506, which is part of the color signal processing circuit 5 (Nishiyama, figure 6, col. 6, lines 50-56). Subsequently, a color difference signal based on the output of the color signal separation circuit 506 is produced by the mixing circuit 509. This color difference signal undergoes an amplitude adjustment in a chroma gain circuit 510 (Nishiyama, col. 7, lines 12-17). At this point, that is, after the color separation has already been carried out in color signal separation circuit 506, the color difference signal is sent to the noise removal circuit 511 (Nishiyama, col. 7, lines 15-20). Therefore, the color separation by the color signal separation circuit and the noise removal by the noise removal circuit 511 are two distinct operations that are not carried out simultaneously. The noise removal operations are in fact dependent on the separated color signals, and thus the noise removal cannot be carried out during the color separation process.

As such, even assuming *arguendo* that an intensity of the alleged color separating process in Nishiyama was increased or decreased, Nishiyama does not disclose or suggest that an occurrence of noise generation is not thereby increased during color separation as set forth in claim 1.

(2) In addition, in the previous Amendment, Applicants submitted that a skilled artisan would not be motivated to use the purported noise removal circuit of Nishiyama in Konishi. Konishi is directed to a still camera. The noise reduction in Nishiyama calls for use of delay lines 407a, 407b giving a delay of a horizontal scanning period. (col. 5, lines 7-14) The delay signals are used for purposes of *noise correction* as applied to a color difference signal. It was submitted that the concepts of line delay and color differences characterize a moving picture but

have no place in a still image camera. Therefore, a skilled artisan would have no expectation of success that the noise reduction circuit in Nishiyama would operate in Konishi.

In response, the Examiner states in the current Office Action that he “disagrees because both references are indeed in the same field of endeavor of image signal processing, which typically utilizes a noise reduction technique to achieve better signal quality for the image” (Office Action, page 2, paragraph 2). As a clarifying remark, Applicants respectfully submit that, in the previous Amendment, they did not contend that noise reduction techniques are not utilized to achieve better signal quality for an image, but rather submitted that the noise reduction technique disclosed by Nishiyama would not be compatible with a still image camera. This is because, as noted above, the noise removal circuit 511t uses delay signals and color differences which are implemented in moving picture applications/devices, and not in a still image camera.

The Examiner appears to be backtracking from his initial assertions by further contending that Nishiyama was cited to illustrate the general concept of noise reduction in color separation and not how the noise reduction process is carried out; thus it would have been obvious to a skilled artisan to combine Konishi’s teaching of color separation and Nishiyama’s teaching of the concept of noise reduction in color separation to achieve clearer image quality (Office Action, page 2, paragraph 2). As discussed above with respect to point (1), even if a skilled artisan were to combine the concept of noise reduction as taught by Nishiyama with the teachings of Konishi, the resulting device would still implement *any* noise removal technique after Konishi carries out the alleged color separation process. Moreover, the Examiner readily admits that Konishi does not disclose that *when relatively increasing or decreasing the intensity of a color separating process, an occurrence of noise generation is not thereby increased during color separation*. As submitted earlier, solely by virtue of Konishi not disclosing this feature,

any combination of Inai, Konishi, and Nishiyama does not read on the claim regardless of Nishiyama's teachings regarding the general concept of noise removal, since the general concept is taught as being carried out after the color separation process, and not during the process. The Examiner fails to show how noise generation is not increased during color separation, when an intensity of the color separating process is increased or decreased as required by claim 1.

In view of the above, Applicants respectfully submit that Inai, Konishi, and Nishiyama, alone or in combination, do not disclose or suggest all the features of claim 1 is as complete detail as set forth in the claim. Accordingly, Applicants respectfully request the Examiner to withdraw the 35 U.S.C. § 103(a) rejection of claim 1.

Claim 4 recites features similar to those noted above with respect to claim 1. Therefore, Applicants respectfully submit that claim 4 is patentable for *at least* reasons similar to those given above with respect to claim 1.

Since claims 2-3, 5-14, and 16 depend from claims 1 and 4, Applicants submit that claims 2-3, 5-14, and 16 are patentable *at least* by virtue of their dependency.

Claim 15

Claim 15 depends from claim 1. Since Nagata does not cure the deficient teachings of Inai, Konishi, and Nishiyama, Applicants submit that claim 15 is patentable *at least* by virtue of its dependency.

Claims 17-18

Claims 17-18 depend from claim 1. Since Kubo does not cure the deficient teachings of Inai, Konishi, and Nishiyama, Applicants submit that claims 17-18 are patentable *at least* by virtue of their dependency.

New Claims

New claims 19-24 are patentable *at least* by virtue of their dependency.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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